

The high- and low-pressure cylinders are each subdivided, one portion for ahead and the other for astern steaming.

On reversal the average temperature change in the high-pressure cylinder is only about 50° F. The first stage of the turbine is a two-row velocity

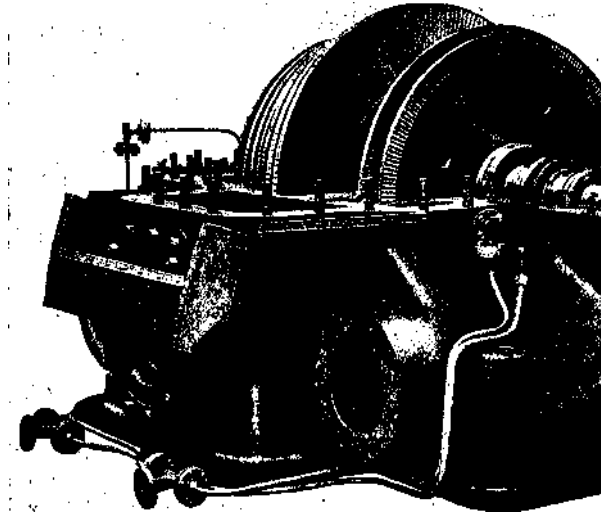
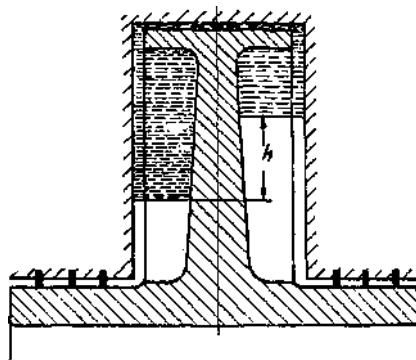


Fig. 50.—L.P. Metropolitan-Vickers Impulse Marine Turbine with Cover Removed

wheel, the remaining stages single-row wheels. The nozzles are divided into groups, so that by admitting steam to a group or combination of groups throttling losses are avoided at seven

different
ahead
speeds.

The
astern
nozzles are
a single
group
giving about
65 per cent
of the
normal
ahead



power for astern steaming. A small thrust block is provided at the governor end of the turbine, maintaining the correct register of the spindle relative to the cylinder.

The
high-
pressure
cylinder is
not
subjected
to

greater
pressures
than
30 to 40
lb. per
square
inch
gauge,
and these
are
limited to
the first

Fig. 51.—Water Sealed Gland

stage.

The
cylinders
are made
of high-
grade
cast iron,
and are
bolted
direct
to the
gear
case, the
forward
ends
being
provided
with
special
sliding
seatings
to allow
for
expansion

Fig. 50 shows the low-pressure turbine with top removed.

The blading and diaphragms follow the makers' land turbine practice.

The critical speed is always kept well above the running speed.

The glands (fig. 51) are of the combined water and steam seal type.